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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/941,478 | 08/29/2001 | Jens Roever | US018133 | 6468 |

7590 08/13/2004

Corporate Patent Counsel
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EXAMINER

CHOI, WOO H

ART UNIT PAPER NUMBER

2186

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

✓

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 09/941,478 | Applicant(s) ROEVER, JENS | |
| | Examiner Woo H. Choi | Art Unit 2186 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-11 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 9, 10 and 13 – 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamijo (US Patent No. 6,772,280).

3. With respect to claims 9 and 13, Kamijo discloses a buffer management system for controlling access to a buffer (figure 9), comprising a buffer manager that is configured to assert a wrap signal when a first access to the buffer is non-sequential (figure 2, figure 5, when an input data is same as the prior entry, the count section of the prior entry is incremented, i.e. “wrap signal”, resulting in a non-sequential access since the access is to the same location as the prior entry location), and is further configured to limit a second access to the buffer in dependence upon the wrap signal (figure 7, the number of times the repeated entry is to be accessed is limited by the count, the read access is also limited to the block address of the last prior entry).

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4. With respect to claim 10, the first access to the buffer includes an access that is based on a block address (address of the preceding entry) and an offset address (0 or 1 depending on whether the data is repeated), and the second access to the buffer is limited to the block address when the wrap signal is asserted (read access is limited to the address of the preceding entry when the “wrap signal” or the count is not zero), and is limited to a combination of the block address and the offset address when the wrap signal is deasserted (if the new entry is not the same as the preceding one, the count is zero and the read access is extended by 1, the offset address).

5. With respect to claim 14, Kamijo discloses a method of controlling access to a buffer (figures 2, 5 and 7) comprising:

determining a block address and an offset address (figure 5, S14, block address is the same as the last entry's if same as preceding data and the offset is 0) corresponding to a first access to the buffer, determining when the offset address is non-sequential relative to the block address, and limiting a second access to the buffer to the block address when the offset address is non-sequential (read access is limited to the last entry).

6. With respect to claim 15, the method further includes:

determining when the offset address is sequential relative to the block address (figure 2, and figure 5, S15, if different from preceding data, a new entry is created sequentially), and limiting the second access to the buffer to a combination of the block address and the offset address when the offset address is sequential (figure 7, S25).

7. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Garcia *et al.* (US Patent No. 6,145,061, hereinafter "Garcia").

Garcia discloses a method of controlling access to a buffer (figure 6B, and 6D) comprising:

determining a block address (94, Qbase) and an offset address (96, Head Offset) corresponding to a first access to the buffer, determining when the offset address is non-sequential relative to the block address (offset is 0), and limiting a second access to the buffer to the block address when the offset address is non-sequential (read access is limited to the head pointer).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamijo in view of Mannion (US 6,553,448).

Kamijo discloses all of the limitations of the parent claims as discussed above. However, Kamijo does not specifically disclose that a change of limit of the second

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access is communicated via a gray-code sequence. On the other hand, Mannion discloses the use of gray code to change the access limit (col. 4, lines 53 – 56).

It would have been obvious to one of ordinary skill in the art, having the teachings of Mannion and Kamijo before him at the time the invention was made, to use the gray code teachings of buffer control system of Mannion in the buffer control system of Kamijo, so that the uncertainty error of the encoded pointer index values can be limited to at most the previous index location (col. 5, lines 4 – 6)

Allowable Subject Matter

9. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Qureshi (US Patent No. 5,974,516) discloses a buffer management system with non-sequential access and an associated signal. Shaler et al. (US Patent No. 6,625,440) disclose a memory management system with non sequential write access and sequential read access.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Woo H. Choi whose telephone number is (703) 305-3845. The examiner can normally be reached on M-F, 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (703) 305-3821. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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August 6, 2004


MATT KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER